

THE WARBLER

AN EDUCATIONAL WEEKLY

ISSUE

97

Dear Student, Artist, Thinker,

In the words of Edgar Degas, “Art is not what you see, but what you make others see.” In a time of advancing and increased dependence on technology as a tool of communication, this quote highlights something we often forget — art is also an important way of conveying deeper meaning on a mass scale. For centuries, civilizations have been using art to catalog history and communicate with one another. For instance, an Indonesian scientist working in Leang Tedongnge found a cave painting dating back 45,500 years ago. This painting is a life-sized picture of a wild hog in dark red paint made from clay. The ancient civilization responsible for this work and many others from the time applied this clay paint pigment with their hands using saliva as a binding agent. At the time, civilizations survived by hunting and gathering their food, and so to show both respect to the animals and the importance of this practice, people would paint the animals that were in the area. Traveling hundreds of yards into the cave and creating these massive bottom-to-top works on the walls communicated these cultures’ priorities. Whether intentional or not, by making this art, these civilizations gave historians important insight into what was happening tens of thousands of years ago.

Not only can painting be used to show the history and thoughts of entire civilizations, but it can also be used as a tool of self-reflection. When thinking of paintings of people, maybe the grim face of Leonardo da Vinci’s *Mona Lisa* or the stiff frames of the figures in *American Gothic* by Grant Wood comes to mind. However, many believe that an artist’s ultimate test of skill is not rendering other models in detail but rather turning their canvas into a mirror and trying to capture themselves. Throughout the centuries many renowned artists have used self-portraiture as a form of looking inwards. One of the most well-known artists to do this was Vincent Van Gogh, who is best known for painting the *Starry Night*. Van Gogh painted 35 self-portraits in his life and much preferred them to photographs. Van Gogh believed that it was more important for one to capture how they feel and the contents of their mind through painting than through the flat black and white reality of photography. As Van Gogh points out, through painting one can be intentional about how they want to be remembered.

In a time when we often think of communication as what we say, don’t forget that art is a way to capture thoughts and moments that will one day be considered history. Art lasts well after spoken words leave the air and can even be a way to become more familiar with oneself. We hope you enjoy learning more about the history and science of painting in this edition of *the Warbler*.

Katie and the APAEP team

“I paint American people, and I tell American stories through the paintings I create.”

AMY SHERALD // African-American painter

FEBRUARY 16, 2022

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WORDS INSIDE

FOUND INSIDE “CREATIVITY | THE WEIRD AND WONDERFUL ART ...”

plumage | the entire feathery covering of a bird

aesthetically | in a way that gives pleasure through beauty

FOUND INSIDE “MICHELANGELO’S PAINTING OF ...”

fresco | The art or technique of painting a moist, plaster surface with colors ground up in water or limewater mixture

theologian | a person versed in theology, especially Christian theology; divine

sibyls | an oracle or prophetess in ancient Greece who was known to prophesy (predict the future) at holy sites under the influence of a higher power

FOUND INSIDE “WHAT IS PAINT AND HOW ...”

viscosity | the property of a fluid that resists force tending to cause the fluid to flow



HISTORY

Michelangelo's Painting of the Sistine Chapel Ceiling

FROM *ITALIANRENAISSANCE.ORG* | May 9, 2013

The Sistine Chapel is one of the most famous painted interior spaces in the world, and virtually all of this fame comes from the breathtaking painting of its ceiling from about 1508-1512. The chapel was built in 1479 under the direction of Pope Sixtus IV, who gave it his name ("Sistine" derives from "Sixtus"). The location of the building is very close to St. Peter's Basilica and the Belvedere Courtyard in the Vatican. One of the functions of the space was to serve as the gathering place for cardinals of the Catholic Church to gather to elect a new pope.

Originally, the Sistine Chapel's vaulted ceiling was painted blue and covered with golden stars. The walls were adorned with frescoes by different artists, such as Pietro Perugino, who painted Christ delivering the keys to St. Peter there in 1482.

In 1508, Pope Julius II (reigned 1503-1513) hired Michelangelo to paint the ceiling of the chapel, rather than leaving it appear as it had. Before this time, Michelangelo had gained fame through his work as a sculptor, working on such great works as the Pieta and David. He was not, however, highly esteemed for his work with the brush. According to Vasari, the reason why Julius gave such a lofty task to Michelangelo was because of the instigation of two artistic rivals of his, the painter Raphael and the architect Bramante. Vasari says that the two hoped that Michelangelo would fall flat, since he was less accustomed to painting than he was to sculpting, or alternatively he would grow so aggravated with the Julius that he would want to depart from Rome altogether.

Rather than falling on his face, however, Michelangelo rose to the task to create one of the masterpieces of Western art. The ceiling program, which was probably formulated with the help of a theologian from the Vatican, is centered around several scenes from the Old Testament beginning with the Creation of the World and ending at the story of Noah and the Flood. The sequence begins with Creation, above the altar, and progresses toward the entrance-side of the chapel on the other side of the room.

Michelangelo began painting in 1508 and he continued until 1512. As the paintings moved toward the altar side of the chapel, the figures are larger as well as more expressive of movement. Two of the most important scenes on the ceiling are his frescoes of the Creation of Adam and the Fall of Adam and Eve/Expulsion from the Garden.

In order to frame the central Old Testament scenes, Michelangelo painted a fictive architectural molding and supporting statues down the length of the chapel. These



were painted in grisaille (greyish/monochromatic coloring), which gave them the appearance of concrete fixtures.

Beneath the fictive architecture are more key sets of figures painted as part of the ceiling program. These figures are located in the triangles above the arched windows, the larger seated figures between the triangles. The first group include Old Testament people such as David, Josiah, and Jesse — all of whom were believed to be part of Christ's human ancestry. They complemented the portraits of the popes that were painted further down on the walls, since the popes served as the Vicar of Christ. Thus, connections to Christ — both before and after — are embodied in these paintings which begin on the ceiling and continue to the walls.

The figures between the triangles include two different types of figures — Old Testament prophets and pagan sibyls. Humanists of the Renaissance would have been familiar with the role of sibyls in the ancient world, who foretold the coming of a savior. For Christians of the sixteenth century, this pagan prophecy was interpreted as being fulfilled in the arrival of Christ on earth. Both prophets from the Old Testament and classical culture therefore prophesied the same coming Messiah and are depicted here. One of these sibyls, the Libyan Sibyl, is particularly notable for her sculptural form. She sits on a garment placed atop a seat and twists her body to close the book. Michelangelo has made the sibyl respond to the environment in which she was placed.

It has been said that when Michelangelo painted, he was essentially painting sculpture on his surfaces. This is clearly the case in the Sistine Chapel ceiling, where he painted monumental figures that embody both strength and beauty. ●

Michelangelo,
Sistine Chapel
Ceiling, 1508-
1512, fresco

**"Painting
is just
another way
of keeping
a diary."**

PABLO PICASSO
// Spanish painter,
sculptor, and
designer

● Edited for
space and clarity

BIOGRAPHY

Jaune Quick-to-See Smith Maps New Meanings

BY JOSHUA HUNT | *The New York Times Style Magazine* | December 2, 2021

As a child growing up on the Flathead Reservation in Montana, Jaune Quick-to-See Smith was “like a magnet,” she said, constantly picking up whatever information might help her make sense of the world. It was not an easy world to understand: Born in 1940, she had “a dystopian childhood,” she told me recently from her home near Albuquerque, N.M. Her father worked as a horse trader.

When she was 7, Smith began hiding in trees to read anything and everything she could borrow from a bookmobile that occasionally passed through town. It was an escape from her work, but not always from the bitter realities of living through an ongoing American genocide. “The stories in Steinbeck told me what was going to happen to me when I was older,” she said to me. “Knowing what I faced in my future, I even thought about suicide in my teens, which is very common for Native people... we were people who were lost and just grasping.”

Instead, she found inventive and incisive ways to critique how power and hegemony work on canvas, using materials ranging from charcoal and acrylic paints to newspaper print and other text elements. In high school, a guidance counselor suggested vocational courses because, he said, “Indians don’t go to college.” Then, after Smith did just that, first at Olympic College in Washington and then at Framingham State University in Massachusetts, she was discouraged from applying to the M.F.A. program at the University of New Mexico. “In the art department, they said, ‘Indians go to art ed, you can’t go to fine arts,’” she told me. “Because Indians do crafts.” Unmoved by the sort of discouragement she’d already heard, Smith took classes there anyway, ultimately spending four years accumulating credits. Along the way, she met other American Indian artists, people like Emmi Whitehorse and Ed Singer, and formed the Grey Canyon Artists collective.

The art world, by contrast, was somewhat more accepting of Smith’s ambitions. In 1979, she joined New York’s Kornblee Gallery after the painter Susan Crile bought some of her work and arranged a meeting between Smith and Jill Kornblee. The following year, after her first solo exhibition at Kornblee received media attention from *Art in America* and the *Village Voice*, Smith left the University of New Mexico with an M.A. in visual arts. Three of her abstract pastel, charcoal and graphite pencil on paper pieces from this period are now in the permanent collection of the Whitney Museum of American Art. Even without the strong use of text that has defined so much of Smith’s work since, they call to mind Kandinsky set

loose on the American plains, betraying an already highly evolved style and worldview.

In the subsequent decades, Smith had many more shows and continued to hone and deploy her distinct visual language, one infused with a Pop Art sensibility that often situates the symbols of American empire and Native life alongside one another to striking effect. “Spam” (1995), for instance, suggests centuries of lost food traditions through the simple outline of a buffalo painted on a canvas collaged with newspaper clippings, with the title of the work spelled out beneath its hoof. “Gifts for Trading Land With White People” (1992) incorporates a canvas similarly plastered with pieces of newspaper and inscribed with the image of a canoe. Above the canvas hangs a range of sports memorabilia (baseball caps, bumper stickers) from real sports teams with Native American names or mascots. And in “State Names” (2000), a multicolored map of the United States seems to ooze with dripping paint that obscures the few state and territory names that didn’t stem from Indigenous sources.

Smith’s new body of work, “Indigenizing the Colonized U.S. Map,” 12 large-scale mixed-media paintings that form the majority of “Woman in Landscape” on view now at the Garth Greenan Gallery in New York, is a continuation of her decades-long interest in maps. These canvases feature different renderings of a U.S. map turned on its side, awash in color and plastered with text and other collage elements that highlight the disorienting effect of being handed a map of your home by the person who has stolen it from you. “A map is not an empty form for me, it’s not an icon of this incredible country,” the artist told me. “It’s not just a vacant idea, it’s real. It’s about real land — stolen land, polluted land.” When she looks at a map, she sees the many reservations she’s visited and the many people she’s known on them. She sees bloodshed, oil pipelines; she sees the climate disaster brought about by the plundering of resources. And, at the same time, she sees the miracle that is our continued existence as American Indians.

“I think I’m a miracle and I say that whenever I talk to an audience,” Smith said. “I tell them: ‘I’m a miracle, and any Native person here is a miracle.’” ●



Jaune Quick-to-See Smith, photographed in October at her studio near Albuquerque, N.M.

Photo by Kalen Goodluck

“The only thing I know is that I paint because I need to, and I paint whatever passes through my head without any other consideration.”

FRIDA KAHLO //
Mexican artist

MATHEMATICS

Sudoku

#193 PUZZLE NO. 269030

		8	1					
					2	6		
1					4	3	9	
	4	3					5	8
		5		2				9
	1						2	
					8			
7			5	1				
	5	4	7					

#194 PUZZLE NO. 9769238

				1				3
		4					2	7
8			2			6		9
					6	7	9	
	3							
		8						
		3			7		6	1
	7		8		5	3		
9						8		

©Sudoku cool

SUDOKU HOW-TO GUIDE

- 1.** Each block, row, and column must contain the numbers 1-9.
- 2.** Sudoku is a game of logic and reasoning, so you should not need to guess.
- 3.** Don't repeat numbers within each block, row, or column.
- 4.** Use the process of elimination to figure out the correct placement of numbers in each box.
- 5.** The answers appear on the last page of this newsletter.

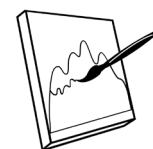
The diagram shows a 9x9 grid with numbers placed in some cells. The grid is divided into 3x3 boxes by thicker lines. Labels indicate the components:

- BOX**: Points to the top-left 3x3 box.
- BLOCK**: Points to the middle 3x3 box.
- COLUMN**: Points to the rightmost column of the grid.
- ROW**: Points to the bottom row of the grid.

			3	9			1	
5		1					4	
9			7			5		
6		2	5	3			7	
				7				8
7			8			9		3
8		3		1			9	
	9		2		6			7
4					3		6	1

What the example will look like solved

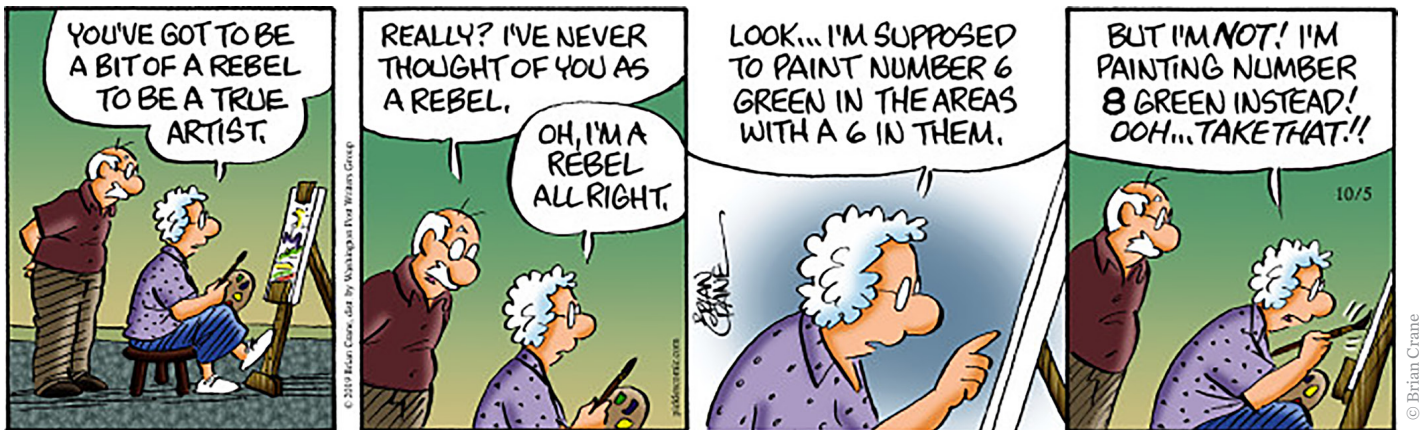
2	4	8	3	9	5	7	1	6
5	7	1	6	2	8	3	4	9
9	3	6	7	4	1	5	8	2
6	8	2	5	3	9	1	7	4
3	5	9	1	7	4	6	2	8
7	1	4	8	6	2	9	5	3
8	6	3	4	1	7	2	9	5
1	9	5	2	8	6	4	3	7
4	2	7	9	5	3	8	6	1



“Sketching is like dancing. It’s process as much as product. You can turn your head off and just sort of dissolve into the now. Doing a giant, super thought-out painting is the opposite of that.”

MOLLY CRABAPPLE // American writer and artist

Icons from the Noun Project



© Brian Crane

DID YOU KNOW?

About 10% of ALL paint we buy in the US is eventually thrown out, and the majority of that is paint bought for residential projects. That's more than **60,000,000 gallons** down the drain!

Throughout history a **red front door** has symbolized many things, from a safe place for travelers to stop for the night to having a fully paid mortgage.

The **first painters' union** was formed in London in 1502 and was called the Worshipful Company of Painters-Stainers.

Source: <https://jerryenospainting.com/blog/8-fun-facts-about-painting/>

There tend to be more **shades of green** than any other in commercially available paint colors because the human eye can distinguish more variations of green than of any other color.

House painters and artists alike were once expected to grind their own pigments with a **mortar and pestle**, which may be why there was a time when only well off people in the US would have had a painted house.

It was the **Greek philosopher Plato** who discovered that you can mix two different paint colors together to produce a third color.

Idiom

“Paint the town red”

Meaning A wild night out

Origin The phrase “paint the town red” most likely owes its origin to one legendary night of drunkenness. In 1837, the Marquis of Waterford — a known lush and mischief maker — led a group of friends on a night of drinking through the English town of Melton Mowbray. The bender culminated in vandalism after Waterford and his fellow revelers knocked over flowerpots, pulled knockers off of doors and broke the windows of some of the town's buildings. To top it all off, the mob literally painted a tollgate, the doors of several homes and a swan statue with red paint. The marquis and his pranksters later compensated Melton for the damages, but their drunken escapade is likely the reason that “paint the town red” became shorthand for a wild night out. Still yet another theory suggests the phrase was actually born out of the brothels of the American West, and referred to men behaving as though their whole town were a red-light district.

Source: [history.com/news/10-common-sayings-with-historical-origin](https://www.history.com/news/10-common-sayings-with-historical-origin)



THE OLDEST HOUSE PAINT WAS MADE OF LIME MIXED WITH MILK AND SOMETIMES NATURAL PIGMENTS. KING TUT'S TOMB WAS PAINTED WITH **MILK PAINT**! EVEN THE WHITE HOUSE WAS ORIGINALLY PAINTED WITH A LIME-BASED WHITEWASH.



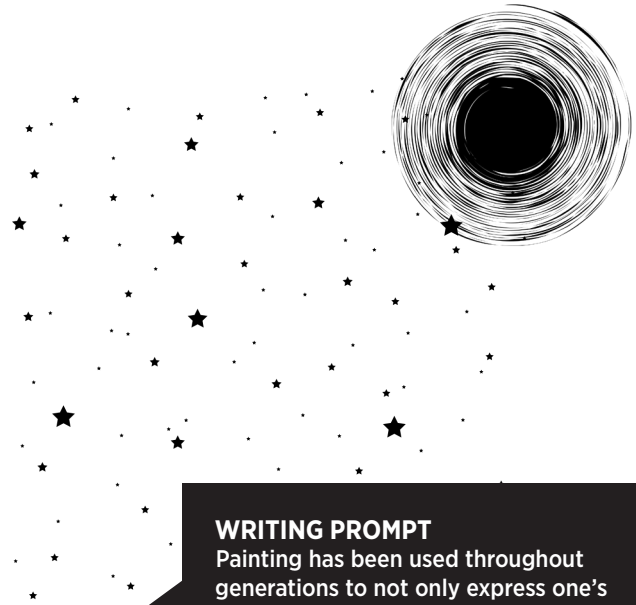
IN 1940 CANADIAN NORMAN BREAKLEY INVENTED THE **FIRST PAINT ROLLER**. HE DIDN'T PROFIT FROM IT BECAUSE HE NEVER PATENTED IT. DURING WORLD WAR II, AN INVENTOR WORKING FOR SHERWIN-WILLIAMS ALSO CREATED A ROLLER BRUSH BECAUSE THE HOGS' HAIR USED FOR PAINTBRUSHES WAS UNAVAILABLE THANKS TO THE WAR.

ART + CULTURE

The Starry Night

BY ANNE SEXTON

The town does not exist
 except where one black-haired tree slips
 up like a drowned woman into the hot sky.
 The town is silent. The night boils with eleven stars.
 Oh starry starry night! This is how
 I want to die.
 It moves. They are all alive.
 Even the moon bulges in its orange irons
 to push children, like a god, from its eye.
 The old unseen serpent swallows up the stars.
 Oh starry starry night! This is how
 I want to die:
 into that rushing beast of the night,
 sucked up by that great dragon, to split
 from my life with no flag,
 no belly,
 no cry.



WRITING PROMPT

Painting has been used throughout generations to not only express one's emotions or feelings but to also document a person's community or history of their community. This week, find inspiration from a famous painter or your own creativity to write a poem, short story, creative nonfiction essay, or script that either expresses something found within yourself or displays the history of your community.

Word Search

R	S	R	E	T	N	I	A	P	T	Y	H	A	C
U	O	R	M	R	A	B	O	A	H	H	M	Y	V
C	I	M	H	P	U	T	I	S	N	O	H	D	I
O	N	R	O	U	T	H	U	S	H	U	T	U	S
R	E	O	R	S	S	R	N	D	O	R	Y	O	I
A	H	T	I	T	B	T	D	U	P	T	H	L	O
R	C	S	Z	D	D	N	R	V	H	R	R	C	N
V	A	R	O	H	H	Y	C	O	Y	B	Y	T	Y
I	N	R	N	R	E	D	N	U	H	T	V	I	P
R	V	I	O	O	I	N	R	H	R	O	Z	S	H
E	A	T	S	N	N	O	P	N	O	H	R	L	E
Z	S	M	E	J	O	U	R	N	E	Y	O	R	L
V	S	Z	S	D	S	T	O	I	T	J	U	V	J
I	Y	E	T	C	E	T	T	E	L	A	P	D	C

JOURNEY
 CLOUDY
 BRUSH
 THUNDER
 HORIZON
 CANVASS
 STORM
 PAINTER
 PALETTE
 VISION
 RHYTHM

Anne Sexton was born in Newton, Massachusetts and raised in Weston, Massachusetts. One of the most popular poets of mid-20th century America, Sexton's impressive body of work continues to be widely read and debated by literary scholars and cultural critics alike. According to Diane Hume George, "Anne Sexton's poetry tells stories that are immensely significant to mid-twentieth-century artistic and psychic life. Ann died in October of 1974.

SCIENCE

Creativity | The Weird and Wonderful Art of Animals

BY JASON G GOLDMAN | BBC | July 23, 2014

At first glance, the Vogelkop Gardener bird is boring. Its drab olive-brown plumage makes it hard to spot against the dirt on which it lives. However, a closer look reveals that this otherwise dull bird has a secret: the males build elaborate, aesthetically pleasing objects.

Bowers are decorated structures that the males build to woo females. In some places they're tall towers made of sticks resting upon black moss, decorated with snail shells, acorns, and stones. In other places, they're woven towers built on green moss, adorned with fruits, flowers, and severed butterfly wings. The males place each item in their bowers with great precision; if the objects are moved, the birds return them to the original arrangement.

"Decorating decisions are not automatic but involved trials and 'changes of mind,'" wrote UCLA physiologist Jared Diamond, one of the first researchers to intensively study the birds' complex bowers. Diamond discovered that bower building was not innate, at least not entirely. The younger birds had to learn how to build the best bowers, either through trial and error, or by watching more experienced birds, or both.

Diamond concluded that bower building was a creative process where each bird had his or her own individual tastes and preferences, and where each decision was made with intention and care. Bowerbirds, in other words, are animal artists — at least in sense that they take care in producing unique works that humans and birds alike find aesthetically pleasing.

Bowerbirds aren't the only non-human artists. Congo was a male chimpanzee born in 1954 at London Zoo. When Congo was two years old, the British zoologist and artist Desmond Morris gave the chimp a pencil. "He took it and I placed a piece of card in front of him," Morris told *The Telegraph* in 2005. "Something strange was coming out of the end of the pencil. It was Congo's first line. It wandered a short way and then stopped. Would it happen again? Yes, it did, and again and again." Congo eventually graduated from pencils to paintbrushes. He and his art were featured on the British television program *Zoo Time*, and in 1957 the Institute of Contemporary Arts featured his work in an exhibition.

While he never painted identifiable images — no portraits, no landscapes, no still lifes — Congo's style was unironically described by some as "lyrical abstract impressionism." He seemed to have a sense of intention in his paintings, and a sense of coherence.

If his paintings or brushes were taken away before he felt he was done, he whined until they were returned to him. If he had completed his work, he refused to continue painting even at Morris's prompting.

Painting is an activity through which the animals can exercise their minds, instead of just their bodies — "enriching" the otherwise boring captive environment. The idea is to stop the animals reverting to repetitive, compulsive behaviors. But does it work?

The jury is still out, and the benefits of creating art as mental exercise probably varies quite a bit from individual to individual. But at least one scientific study has been conducted on painting in zoo elephants, and the results are disappointing for animal art advocates.

The researchers focused on four Asian elephants at the Melbourne Zoo. They found that painting didn't reduce stress-related behaviors in the elephants, nor did it decrease repetitive or abnormal behaviors either before or after their painting sessions.

What that means, according to the researchers, is that painting "does not improve the welfare of elephants". Given that, they suggest "its main benefit is the aesthetic appeal of these paintings to the public and their subsequent sale of which a percentage of funds might be donated toward conservation of the species".

But since the study was limited to just four individuals, it is hard to derive wider conclusions.

Whether drawing or painting serves any useful purpose at the zoo, it is at least clear that humans are not the only animals capable of creating works of art, nor are we the only ones who appear to derive satisfaction from it.

The question of what constitutes art, of what qualifies as creativity, is something that human culture has grappled with for generations. After all, on appearances alone, some might lump Jackson Pollock's work together with Congo's; that could either reflect tremendous respect for the work of the chimpanzee, or contempt for abstract expressionism. Or maybe some will never appreciate animal art.

So, is animal art any good? That depends on your individual perspective. ●



Congo the chimpanzee at the London Zoo in 1957.

Photo from *Daily Mail*/REX

✎ Edited for space and clarity

FEATURE

What Is Paint and How Is It Made?

BY DANIEL LOESCHEN | *Mixer Direct* | June 27, 2019

The first use of paint can be traced back to the French and Spanish people. More than 20,000 and 25,000 years ago, paint ingredients included things like earth pigments, charcoal, juice from berries, lard, blood, and milkweed sap. The Egyptians and Hebrews used it as a protective coating for the wood on their ships.

In the 1700s, Thomas Child built the first American paint mill in Boston, Massachusetts. The first patent for paint was purchased in 1865 by D. P. Flinn. However, it wasn't until 1867 that this company began mixing paints for consumers. Before 1930, stone mills were used to grind the pigments. Later, these were later replaced by steel balls. These days, sand mills and high-speed dispersion mixers grind the dispersible pigments.

What is Paint Made of?

There are four main components in paint: resin, additives, solvent, and pigment. The resin is the binder that holds all the pigments together. It allows the product to adhere to the surface it is painted too. A water-based paint uses acrylic emulsion polymers to bind. Common acrylic polymers come in a wide variety of types and combinations, such as methyl and butyl methacrylate. Inexpensive paints use polyvinyl acetate to bind.

Additives are used to enhance the properties of the substance. It makes it glide on the wall with a brush. It also makes it mold and scuff resistant. Without additives, the drying time would not be as fast as it is and there would be sag resistance. Solvents act as a carrier that helps bind the pigments and resin together. These agents can be organic, like mineral turps, or the manufacturer can use plain water.

Lastly in the paint production process, pigments are used to give paint its color and sheen. They are placed into two groups, prime and extender. The prime pigments will include colors like white, green oxide, yellow and red. In the other group of extenders, it includes calcium carbonate, talc, mica, and barytes to name a few.

The Complex Paint Manufacturing Process

Most people don't give the paint manufacturing industry much thought. They see it as nothing more than a colorful tint that is applied to their walls. However, paint is more than just a color; it is a liquid material that dries

to a beautiful finish. It takes a complex chemical process to turn this liquid into a solid. Paint is used for beautification, protection, sanitation, and even identification.

Consequently, many have no clue what is in paint and the process that is used to generate it.

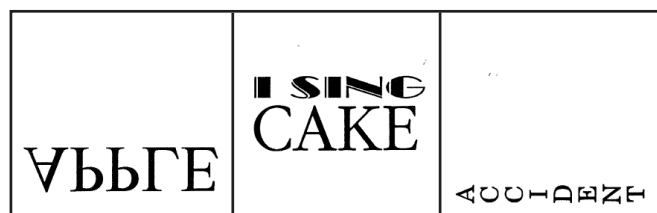
There are five critical parts in the paint manufacturing process. They are a measurement of ingredients, preparation and pigment dispersion, let-down, laboratory testing, and canning. Paint is manufactured in large lots. Using calibrated vats, the ingredients are measured and weighed on scales. Pigments are added next. These powders are small and stick together forming clumps. They are broken down by the resin and additives that keep them from sticking together, which is called dispersion. Industrial paint mixer machines are used to combine and disperse the pigments.

In the let-down stage, the resin, solvent, and additives are combined in a large vat. The mill-base is stirred in during this phase. Any final additions are added during this stage, if necessary. The finished product is tested in a laboratory. Before manufacturing is approved, critical ingredients are tested. They will ensure it is sufficiently mixed and no further processing is needed. They check the viscosity, tint strength, color, gloss, dry time, and overall appearance.

When the batch is complete, it can be canned. Two samples are taken during this phase. A retained sample is kept and stored for future references, and then there is the final inspection sample. The final sample is inspected to guarantee conformance to standards. Once the final sample has been completed, it can be dispatched.



WORD PLAY A Rebus puzzle is a picture representation of a common word or phrase. How the letters/images appear within each box will give you clues to the answer! For example, if you saw the letters "LOOK ULEAP," you could guess that the phrase is "Look before you leap." *Answers are on the last page!*



Understanding Lacquer and Enamel

The humblest types of paint are lacquers that generate a film by evaporation of the solvent. Water-based paint has trillions of tiny resin particles. The water in these paints slowly evaporates and the resin and particles become closer until they are touching. The resin and pigments fuse, forming a tough, solid that is known as paint film.

Enamel paint is made from an alkyd resin that is dissolved in a solvent. As the solvent evaporates in the first stage, it forms a tacky lacquer. The resin reacts with the oxygen in the air and forms a hard coating. Coating paints have two components that are unreactive alone. However, when they are placed together, they undergo a chemical reaction. The reaction may take some time, depending on the room's temperature. The final result is a hard, tough coating that has great adhesion.

As new technologies continue to develop, the boundaries between water-based, solvent-based, and reactive coatings are becoming blurry. For instance, some enamels have water-based emulsion resins that produce polymerization of the dried film. This is similar to what is seen in solvent-based enamels.

Byproducts of the Paint Production Process

The process of making paint creates a lot of byproducts and waste. Any paint manufacturing plant must have an in-house wastewater treatment facility. This facility will treat all the liquids that are generated on-site. It will also handle, store water run-off. These facilities must utilize the Environmental Protection Agency, or EPA, regulations. They must be monitored 24 hours a day as well as conduct periodic record checks. Any liquid waste can be treated on-site by the standards of the facility. The sludge formed from latex can be recycled and used as fillers for other products. Water-based solvents can also be recovered and used as fuels for other industries. A paint container that has been cleaned can be reused or sent to a local dumping facility.

The Color Palette of Life

Very few people truly know how paint is made. It is one of those things that is used every day with little background information. Paint is used everywhere. From the home to the office and even the car. Without color, the world would be very bland. ●

“From a child, I had an inordinate desire for knowledge and especially music, painting, flowers, and the sciences, Algebra being one of my favorite studies.”

GEORGE WASHINGTON CARVER // African-American botanist and inventor

RANDOM-NEST

7 Major Painting Styles

From Realism to Abstract

BY MARION BODDY-EVANS | THOUGHTCO | NOVEMBER 15, 2019

Realism, in which the subject of the painting looks much like the real thing rather than being stylized or abstracted, is the style many people think of as “true art.” Only when examined close up do what appear to be solid colors reveal themselves as a series of brushstrokes of many colors and values. Realism has been the dominant style of painting since the Renaissance.

The Painterly style appeared as the Industrial Revolution swept Europe in the first half of the 19th century. Subjects were rendered realistically, however, painters made no effort to hide their technical work. As its name suggests, the emphasis is on the act of painting: the character of the brushwork and pigments themselves. The paintings of Henri Matisse are excellent examples of this style.

Expressionism and **Fauvism** are similar styles that began to appear in studios and galleries at the turn of the 20th century. Both are characterized by their use of bold, unrealistic colors chosen not to depict life as it is, but rather, as it feels or appears to the artist. The two styles differ in some ways. Expressionists sought to convey the grotesque and horror in everyday life, often with hyper-stylized brushwork and horrific images. Fauvists, despite their novel use of color, sought to create compositions that depicted life in an idealized or exotic nature.

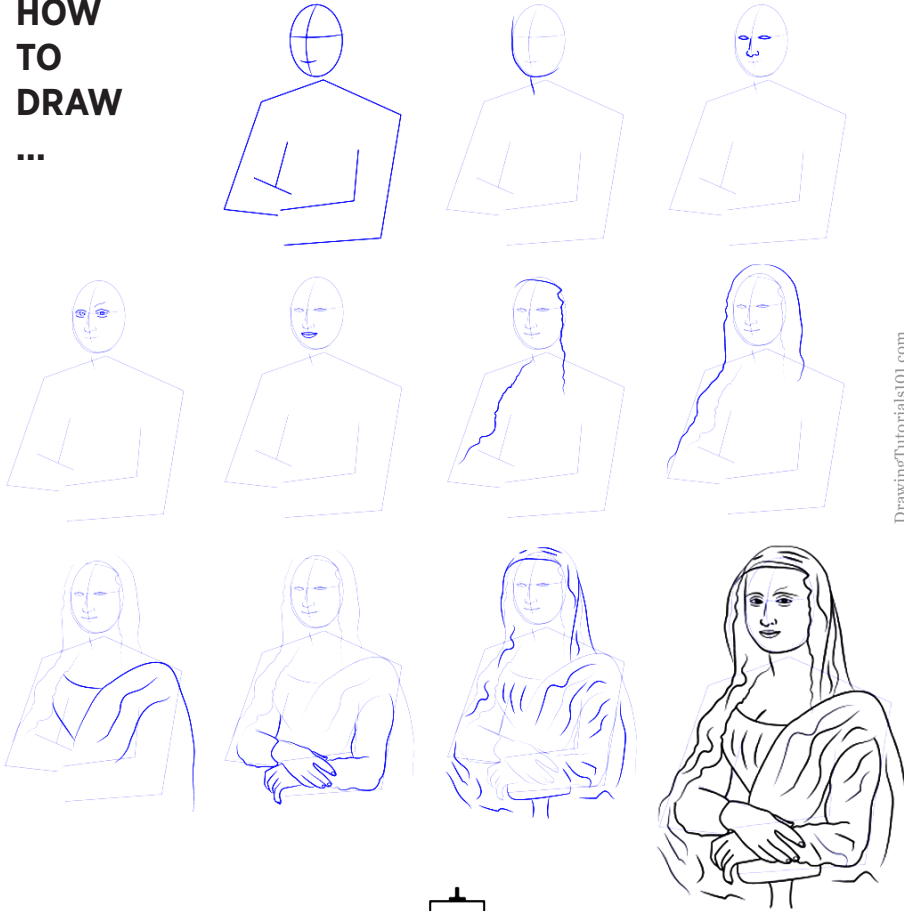
As the first decades of the 20th century unfolded in Europe and America, painting grew less realistic. **Abstraction** is about painting the essence of a subject as the artist interprets it, rather than the visible details.

Purely abstract work, like much of the **Abstract Expressionist** movement of the 1950s, actively shuns realism, reveling in the embrace of the subjective. The subject or point of the painting is the colors used, the textures in the artwork, and the materials employed to create it.

Photorealism developed in the late 1960s and '70s in reaction to Abstract Expressionism, which had dominated art since the 1940s. This style often seems more real than reality, where no detail is left out and no flaw is insignificant. Some artists copy photographs by projecting them onto a canvas to accurately capture precise details. Others do it freehand or use a grid system to enlarge a print or photo.

HOW TO DRAW

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WORDS OF ENCOURAGEMENT

When I was gathering the quotes to be placed this issue of *The Warbler*, one specifically touched me the most:

"The detail adds an element of unexpected something. All fiction is false; what makes it convincing is that it runs alongside the truth. The real world has lots of incidental details, so a painting also has to have that element of imperfection and irregularity, those incidental details."

SHAUN TAN // Australian illustrator, writer, and animated filmmaker

I bring this up here because I feel that this applies also to our presentation of ourselves. We all have an idealized version of ourselves that, particularly in Western culture, we strive to make apparent to others. Obviously, we aren't our ideal selves because we are human. That idealization is fictional per se, but who we aspire to be stands in conjunction with who we are at the moment as we grow. Our own imperfections are part of who we are in the same sense that the "incidental details" in a painting are still a part of the piece. What we gain from our shortcomings, our incidental details, and our "unexpected somethings" is wisdom which can manifest in compassion, understanding, and knowledge. We hope you enjoyed this week's edition of *The Warbler*, and as always, we wish you the best on your journey of self-discovery and personal growth.

Taylor



1061 Beard-Eaves Memorial Coliseum // Auburn University, AL 36849

"Painting is about the world we live in. Black men live in the world. My choice is to include them."

KEHINDE WILEY // African-American painter

Answers

SUDOKU #193

5	9	8	1	3	6	2	7	4
4	3	7	9	5	2	6	8	1
1	2	6	8	7	4	3	9	5
2	4	3	6	9	7	1	5	8
8	7	5	3	2	1	4	6	9
6	1	9	4	8	5	7	2	3
9	6	1	2	4	8	5	3	7
7	8	2	5	1	3	9	4	6
3	5	4	7	6	9	8	1	2

SUDOKU #194

2	5	6	7	1	9	4	8	3
3	9	4	6	5	8	1	2	7
8	1	7	2	4	3	6	5	9
4	2	5	1	3	6	7	9	8
7	3	9	5	8	4	2	1	6
1	6	8	9	7	2	5	3	4
5	8	3	4	2	7	9	6	1
6	7	1	8	9	5	3	4	2
9	4	2	3	6	1	8	7	5



Rebus Puzzle

Page 8:

1. Apple turnover
2. Icing on the cake
3. Accident prone

Send ideas and comments to:

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UNTIL NEXT TIME 🖐️!